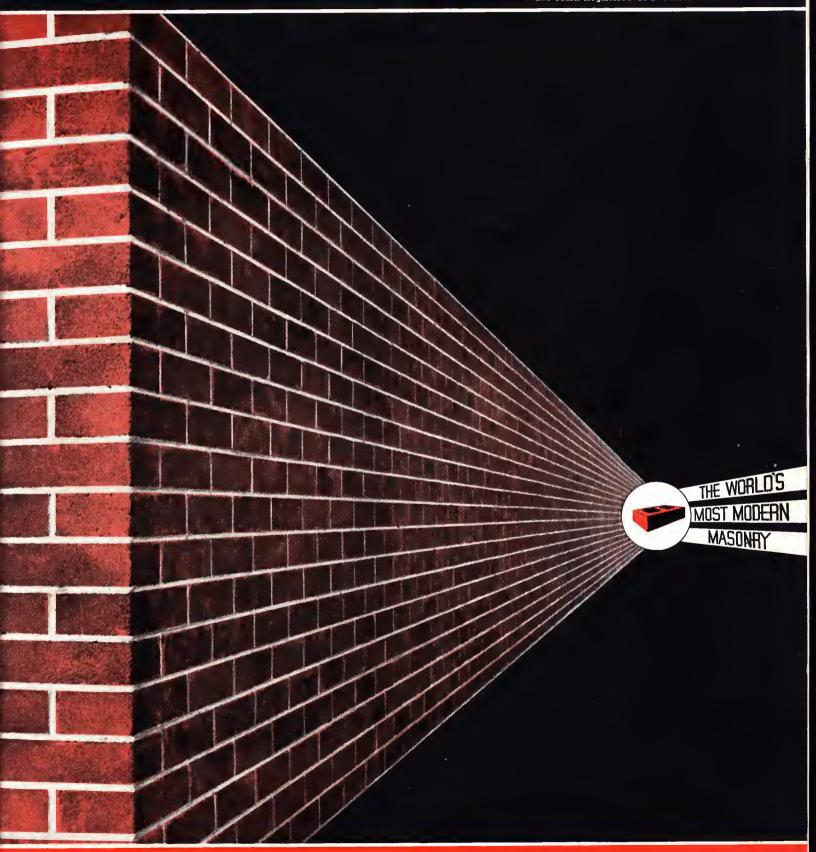
# BRIKCRETE

Trade Mark Registered U. S. Patent Office



COLOR - SYMMETRY - STRENGTH - PERMANENCE - ECONOMY



## BRIKCRETE ... MODERNIZED MASONRY

# Through scientific design and exclusive machinery, Brikcrete creates new standards of quality and economy

THROUGHOUT the centuries, and because it rendered service in greater measure than others, masonry in various forms has always been the favored building material. The same is true today.

Brikcrete is masonry. And as masonry it delivers those many values of permanence, stability and protection that owners have been accustomed to expect. For strength is definitely a Brikcrete asset.

But while Brikcrete is masonry in fundamentals, it brushes away masonry traditions in the manner of its design and application.

Brikcrete is masonry brought up to date. It lifts masonry out of its centuries of sameness and makes it do things. It puts dynamic character into a material that has always been static.

Brikcrete is the modern edition of masonry—streamlined, vibrant and sophisticated. It is in tune with the tempo of today's requirements, which specify that building units, like people, must have distinctive personality and character.

Brikcrete is modern! And looks the part. More important, it acts the part. To the extent of bringing the advantages of improved construction down to the price levels of the mass market.

Brickcrete "Betters the Building and Lowers the Cost." A clever slogan? Possibly! But one that happens to be a simple statement of fact.

Brikcrete betters the building because it is masonry plus. Plus style and modernity. Plus character and distinctiveness. Plus proportion and scientific design. Plus air-insulation properties and weather-resistant qualities. Plus light weight and the beauty of color.

How is it possible to combine so many values into one unit and produce it for such a low price? The answer is contained in two statements:

First, by the creation of a new manufacturing principle and the development of mechanical equipment, through which an ideal in design became a reality as a masonry unit.

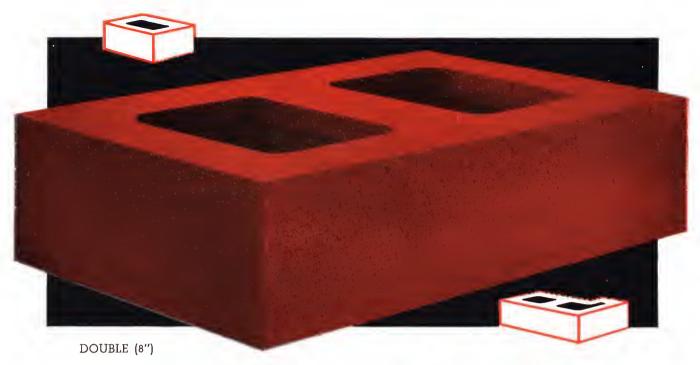
Second, by a scientific lightweight design, the utilization of low-cost materials and local manufacturing; through all of which two of the biggest cost items in masonry—transportation and distribution are virtually eliminated. For Brikcrete is locally made.

Brikcrete takes the money ordinarily spent in the freightage of masonry and splits it two ways: One, by putting the extra quality into the product, the other, in lowering the price to the building owner. In this way, the savings of non-essential costs are passed right along to the owner, and masonry construction is brought down to the price levels of frame and other forms of less enduring construction.

Brikcrete is made in local communities by men to whom franchises have been granted by the builders of the equipment — Brikcrete Associates, Inc. — and only after searching investigation has indicated that such men have the facilities, the ability and the integrity to maintain the uniform quality which the provisions of the Brikcrete franchise require.

Because of the economy of the unit and its savings laid up as a wall, and because of Brikcrete equipment, it makes the manufacturing of Brikcrete a local industry, with its quality stabilized by standard formulas.

When the big question concerns wall construction, Brikcrete has all the answers! The proof is here.



### Two Sizes of Brikcrete

(With Halves and Corners for Each Side)

8-Inch

This is the preferred size for the majority of construction, as it provides for an 8-inch masonry wall, and without requiring such additional items as studding, sheathing, building paper, siding, and successive coats of paint. While a "solid" wall in principle, it actually self-contains liberal air insulation, thus making it more desirable than actual solid construction.

Corner units are mortised to provide a 6-inch end face and thus enable an accurate job of "breaking joint."

Half units, as in the 4" size, permit a flush ending of courses, thus avoiding the raggedness of manual cutting or breaking.

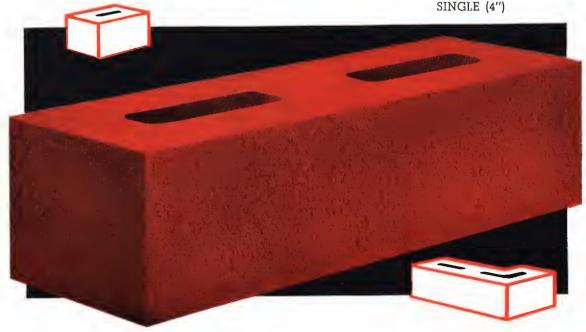
4-Inch

Intended for three major uses: As a partition wall. As a veneer wall in combination with other materials. And for forming a double or "thermo" wall by laying two parallel courses with a solid air curtain in between.

Corner units are L-shaped, with a 6" face on the short side, providing for "breaking joint" exactly with courses below and above.

Half units enable the completion of courses — such as those ending in door and window openings - perfectly smooth and flush, and without the necessity of cutting or breaking.

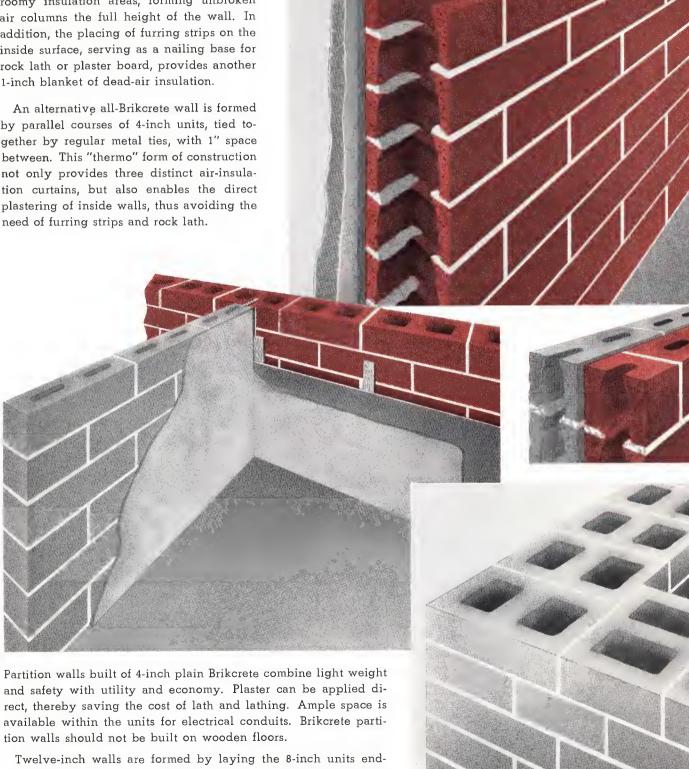




LL points considered, this is the ultimate A LL points construction. With the permanence, stability, safety and low depreciation costs of an 8-inch all-masonry wall are combined double air insulation, outstanding beauty and amazing economy.

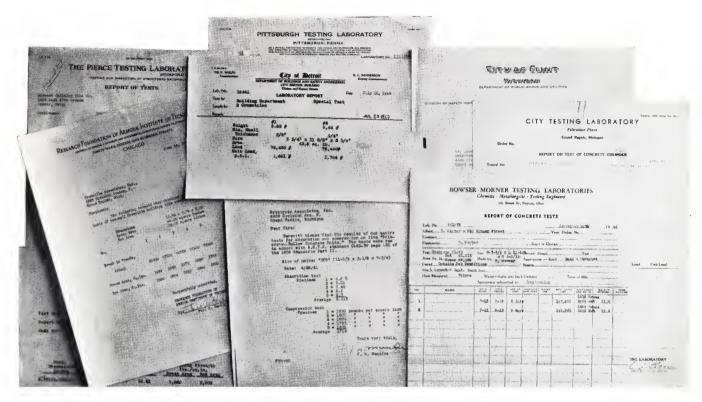
The 8-inch Brikcrete units self-contain roomy insulation areas, forming unbroken air columns the full height of the wall. In addition, the placing of furring strips on the inside surface, serving as a nailing base for rock lath or plaster board, provides another

by parallel courses of 4-inch units, tied together by regular metal ties, with 1" space between. This "thermo" form of construction not only provides three distinct air-insulation curtains, but also enables the direct plastering of inside walls, thus avoiding the



Partition walls built of 4-inch plain Brikcrete combine light weight and safety with utility and economy. Plaster can be applied direct, thereby saving the cost of lath and lathing. Ample space is available within the units for electrical conduits. Brikcrete parti-

long, giving a laid-up face of 8 x 3½". This is not regular Brikcrete proportion, but for many types of walls the unit proportion is not important.



#### **How Strong is Brikcrete?**

This question is best answered by those who take nothing for granted, but dig out the basic facts by laboratory procedure and with scientific accuracy. In other words, by testing engineers operating in established testing laboratories, whose findings are impartial and unbiased, and who at various times have tested and reported on Brikcrete compressive strength. Inasmuch as different aggregates, different curing methods and other variables are present in Brikcrete manufacture, the average of many

independent tests is the only fair basis for calculation. Note list at right.

The figure of 1824.5 lbs., multiplied by the number of square inches in Brikcrete, gives a unit compressive strength of 167,841 lbs. for the Double, and 79,365 lbs. for the Single — approximately 83½ tons and 40 tons respectively.

Laboratory	Strength
Armour Institute	1800
City of Detroit (Aver. of 2)	1707
University of Michigan (Aver. of 5).	1714
City of Grand Rapids	2305
Pittsburgh Testing Laboratory	1170
City of Flint (Aver. of 6)	2524
Pierce Testing Laboratory (Aver. of 19	0)1537
City of Edmonton	2060
Bowser-Morner Testing Lab. (Aver. of	2)1604
Average	*1824.5

\*Pounds per square inch of gross area. This contrasts with the 700-1000 lbs. normally required by most city and state ordinances for units in the Brikerete category.

#### 4354 FEET

#### How High Can You Build?

It is mathematically possible — using 8" Brikcrete — to build 4354 feet high. This is based on compressive strength tests shown above, and figures a unit weight of 11 lbs., including mortar. Allowing a 4-to-1 factor of safety it is still possible to

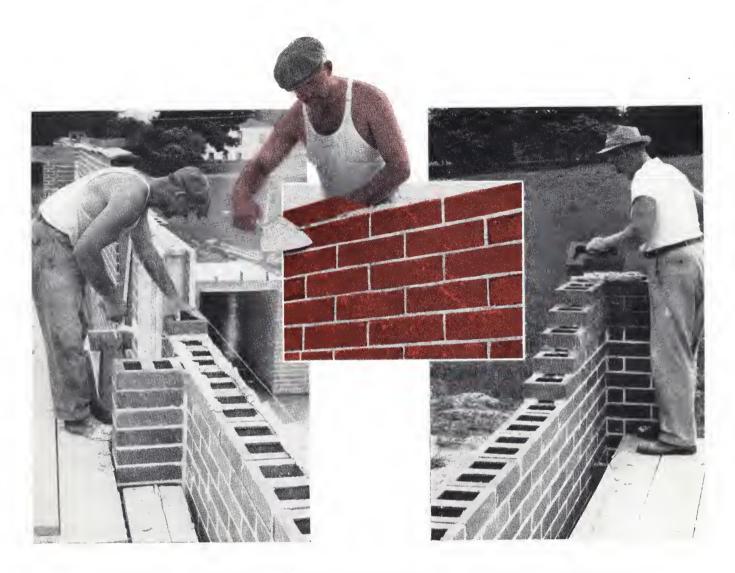
build more than a thousand feet high—or higher than the Empire State Building. In terms of common usage, it means that Brikcrete is approximately 175 times as strong as is necessary for the average residence.



#### **How Water Resistant?**

The water-resistant values of masonry are established by the amount of water it absorbs after complete immersion for a long period—usually 24 hours. Units in the Brikcrete category are usually permitted to absorb 15 lbs. per cubic foot—or 15% of their dry weight. The average of various laboratory tests on Brikcrete has shown an absorption of only 3.39%. Note explanation on page 7. While it is easily possible to get absorption as low as 4% with Brikcrete, it is generally preferred to keep it around 7% in order to provide a good bonding surface for the mortar.





#### Tomorrow's Construction Here Today

Five considerations influence the selection of a residence wall: comfort, safety, beauty, permanence, and economy. All else is secondary or supplementary.

No material OTHER than Brikcrete combines all five features in one unit. No other material surpasses Brikcrete in any one of the five features without drastic sacrifice in some or all of the remaining four.

This is a sweeping statement. So broad and significant that it needs to be proved. And proof needs analysis. So let's analyze the facts:

SAFETY refers to the ability of the material to withstand such hazards as fire, lightning, windstorms, termites and other damaging factors. Being masonry, Brikcrete is highly fire resistant and absolutely termite-proof. It has high intrinsic stability, and — unlike brick—has provision for vertical reinforcement, making it that much more resistant to wind velocities.

BEAUTY in Brikcrete is made up of several things: color, unit size, symmetry, proportion, smaller and fewer mortar joints, and clean-cut simplicity.

The color-effect range of Brikcrete is practically without limit. No other material is so versatile in the matching of wall color to personal preferences. While

of brick proportion, it is twice the face size, with symmetry assured by precision gauged straightness and squareness. Reduction of the number of mortar joints by practically 50%, and mortar joint thickness reduced 33%, mean a cleaner wall expanse, with mortar joint "spotting" reduced accordingly.

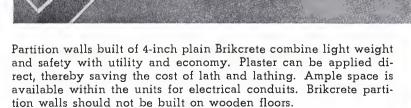
PERMANENCE, or "life expectancy," is one of the main reasons why masonry walls are preferred to frame construction. Solid brick or concrete, for examples, naturally have a longer life expectancy than a wall of studding, sheathing and siding held together with wire! Brikcrete has the long life values of masonry.

COMFORT, as represented by wall construction, is primarily a matter of resisting the infiltration of outside weather conditions (temperature and dampness) into inside rooms. In other words, INSULATION. Brikcrete, by reason of its cellular design, self-contains a deadair space equal to 1/3 - 1/2 of its cubic area. (See page 10). And according to the best authorities, dead air is one of the most effective insulations known.

ECONOMY in wall construction can be interpreted two ways: by a low initial price or by an ultimate low cost. The latter being based on length of life, and low depreciation, upkeep and insurance costs. A LL points considered, this is the ultimate in wall construction. With the permanence, stability, safety and low depreciation costs of an 8-inch all-masonry wall are combined double air insulation, outstanding beauty and amazing economy.

The 8-inch Brikcrete units self-contain roomy insulation areas, forming unbroken air columns the full height of the wall. In addition, the placing of furring strips on the inside surface, serving as a nailing base for rock lath or plaster board, provides another 1-inch blanket of dead-air insulation.

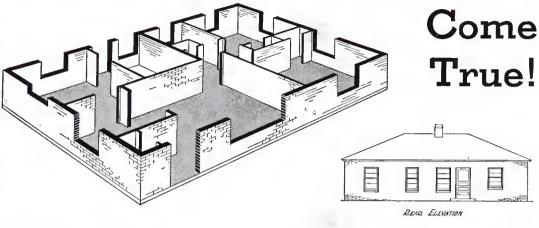
An alternative all-Brikcrete wall is formed by parallel courses of 4-inch units, tied together by regular metal ties, with 1" space between. This "thermo" form of construction not only provides three distinct air-insulation curtains, but also enables the direct plastering of inside walls, thus avoiding the need of furring strips and rock lath.

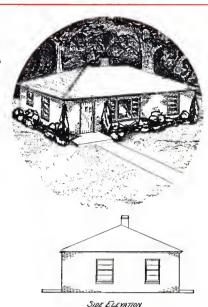


Twelve-inch walls are formed by laying the 8-inch units end-long, giving a laid-up face of  $8 \times 3^{1/2}$ ". This is not regular Brikcrete proportion, but for many types of walls the unit proportion is not important.

### BRIKCRETE

You can Make Your "Dream Home"





# The House that has **Everything** that Most People Want

A survey was conducted among a cross section of intending home owners, concerning the main elements in the design of a small home. Here is the summary of majority opinion:

Ranch type design. Built on a slab for lowness and economy. Masonry walls wherever possible for appearance, safety, long life, economy.

Equivalent to 900 square feet overall.

All rooms on one floor. No attic or basement.

Two bedrooms, none smaller than 100 sq. ft. Large closets. Utility room. Roomy kitchen. Separate dinette. Inside vestibule with wrap closet. Linen closet. Bathtub on side wall.

#### Majority Ideas Were Combined Into One Design

Brikcrete draftsmen designed such a house:

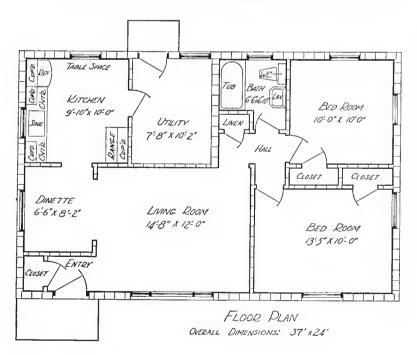
Long and low. Built on a slab. With an overall size of 888 square feet.

With exterior walls of 8" Brikcrete in a range of colors. Partition walls of 4" Brikcrete. All masonry — inside and out.

All rooms on one floor. Bedrooms of 100 sq. ft. and 135 sq. ft. respectively. Big closets. Roomy kitchen. Separate dinette. Comfortable living room. Inside vestibule. Large utility room.

Every square foot put to livable use. The ultimate in comfort, convenience, adaptability. Best of all —

The Brikcrete for all the walls—inside and out—has an average cost of less than \$400.00. That's less—much less—than lumber.



Brikcrete economy is specific and without reservation. It starts with a low price, and increases in evidence as the factors of long life, low depreciation, etc. are considered.

Brikcrete is around 40% less in price than face brick. It costs far less than its square foot equivalent in frame. Its light weight reduces the size and weight—and cost—of footings and foundations.

Reduced to specific figures, 8" Brikcrete averages about 30c per square foot. This means that sufficient Brikcrete for the exterior walls of a fair-sized bungalow (24'x37') can be purchased for less than \$300.00.

Brikcrete is not block — nor brick — nor tile. It is in a class entirely its own. It has taken the virtues and discarded the faults of more conventional materials.

Brikcrete was conceived as the nearest approach to perfection in a masonry unit. It became a reality through the stage of drafting room, laboratory and machine shop. It involved matters of design, materials and manufacturing processes. And its production in sufficient volume to bring its cost down to amazingly low figures was made possible by the unique Brikcrete Densifying machine and companion equipment.

In design, Brikcrete has established a new standard. For the first time it combines beauty with utility; strength with light weight.

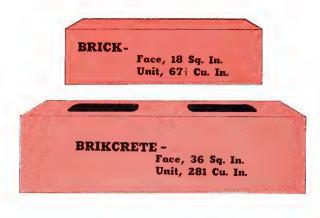
Brikcrete is not a clay product but a blend of minerals, proportioned and coordinated according to the best principles of scientific ad-mixing. By careful formulating, which includes minerals and chemicals for color impregnation and self-contained water-resistant properties, Brikcrete takes on values not possessed by any natural masonry.

Brikcrete does in masonry what is so often done in metallurgy—reduces weight and bulk without sacrifice of required strength. By means of the special oscillating principle employed by the Brikcrete machine, materials are compacted to extreme density. Sinewy strength is compressed into a smaller net area, with the space thus saved used as an insulating agent.

Being formed cold, Brikcrete is not subject to such warping and distortion as are caused by the baking of clay. Thus, the sharp, straight lines and exact rectangles molded into the unit by the machine are preserved intact, making for streamlined symmetry when laid in the wall and providing opportunity for the mason to do full justice to his craft.

Brikcrete is a local product. Made by a local manufacturer, in a local plant, chiefly of local materials, by local labor, and essentially for local consumption. It is a community activity, with responsibility for its success resting squarely on the merit of the product.







#### **Multiple Sized**

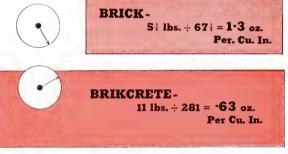
Double Size Brikcrete (8") has twice the face area of regular brick, and more than four times its cubic area. Single Size Brikcrete has twice the face area of regular brick, and twice its cubic area.

#### **Popular Proportion**

The accepted proportion of regular brick is retained intact in Brikcrete, as indicated by the diagonal line on the diagram at left. Thus, while Brikcrete offers the values of a larger unit, it still presents the traditional appearance of regular brick.

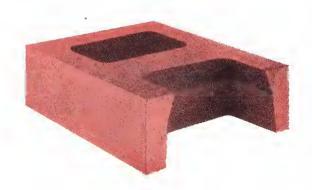
#### Half the Weight

Regular brick is solid - or nearly so. Brikcrete has a cellular design. The result is that - per cubic inch - Brikcrete weighs only 63/100 of an ounce, while brick goes to 1-3/10 ounces.









#### No Mortar Waste

On Brikcrete, a 3/8" layer of mortar is placed only where it's needed, and on a Double Brikcrete the amount of mortar used is 17 cubic inches. On regular brick, mortar is laid half an inch over the top and a quarter inch on end. Four brick (representing an area equal to one Double Brikcrete) would require a total of 70.32 cubic inches.

#### Color Clear Through

Brikcrete color is not simply a surface application but is incorporated into the unit during the mixing process. Brikcrete is colored all the way through - inside and out.

The source of Brikcrete color is Cromalite, a special admixture which not only gives Brikcrete its colorful beauty, but also imparts greater density and gives it high water-resistant values as indicated on page 5.

Cromalite is made in five standard colors: Signal Red, Burgundy Red, Autumn Tan, Dawn Buff, Sunset Buff. From these five, by different blends and combinations, it is possible to secure an almost unlimited range of colored wall effects.

# Compare Them by the "SQUARE"

In the building industry, materials are often referred to and sold by the "square", meaning sufficient to cover an area ten feet by ten feet—a total of 100 square feet. Figures below refer to a "square" of 8-inch wall.

BRICK 1232

### **Number Units Required**

To build a "square" of 8-inch wall it would require 1232 regular brick, but only 340 Single Brikcrete. To build a "square" of 4-inch wall of regular brick it would call for 616 units, but only 340 Double Brikcrete. This effects an enormous saving in handling time.

BRIKCRETE 340

BRICK 8327 Pounds

#### Weight

A "square" of 8-inch wall laid of regular brick will weigh, including mortar, 8327 pounds. Of Double Brikcrete, only 4101 pounds. The excessive weight of regular brick naturally demands heavier and costlier footings and foundations.

BRIKCRETE
4101
Pounds

BRICK
12.53
Cu. Feet

#### **Mortar Content**

A "square" of 8" wall, containing 667 cubic feet, requires 12.53\* cubic feet of mortar when laid with regular brick, which means the so-called "brick" wall is actually 81.2% masonry and 18.8% mortar. Compared with this, the 8" Brikcrete wall the estimated requirement is only 3.9 cubic feet of mortar, raising the masonry content to 94.16% and reducing the mortar volume to 5.84%. Visually, the brick wall is 23% mortar joints, while in Brikcrete it is only 16.7%.

BRIKCRETE
3.9
Cu. Feet

BRICK NONE

#### **Insulation Area**

Regular brick is solid, therefore has no insulation area. It is a high conductor of outside temperatures and dampness into the inside rooms.

Brikcrete is hollow, with air chambers formed into the unit. (See page 10.) Of the total cubic area of Brikcrete 43% is air-insulation space, resulting in conductivity being reduced to a negligible amount.

\*Compares with a net of 13.5 given in "Walker's Estimator."

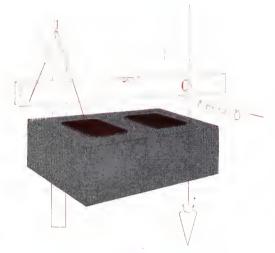
BRIKCRETE
43%



### **Self-Contained Air Space**

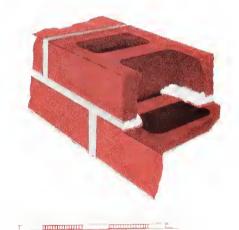
Dead air is considered one of the finest insulation agents known. Nearly half of an 8" Brikcrete wall is dead air area, made possible by connected "cells" which form vertical air curtains extending in unbroken sequence the full height of the wall.

Air insulation tends to temper outside heat and cold, making inside rooms cooler in summer and warmer in winter. Brikcrete air pockets not only serve as "baffles" to counteract outside temperature extremes, but also tend to dry out any absorbed dampness before it has opportunity to penetrate the full width of the web.



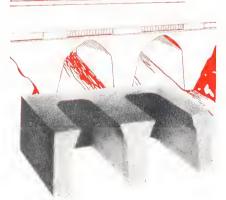
### All Ways Precise

Measured by any instrument and gauged by any standard, Brikcrete is all-ways precise. This is because Brikcrete is formed cold and can thus be held to the close precision limits established by the machine. There is no burning, therefore no consequent warping or distortion. Absolutely straight, square and rectangular, Brikcrete is unswervingly faithful to chalk line, plumb bob and water level. With half units and corner units as equally precise, door and window courses are completed without cutting, and corners are turned with accurate "breaking joint."



#### **Mortar Lock**

As a Brikcrete unit is embedded into position, the displaced soft mortar tends to rise behind and above its lower edge, thus forming a secure anchorage. And when the mortar is set, the unit is locked into a permanently shift-proof position. The tendency to slide around on the mortar bed — commonly known as "floating" — is eliminated.



#### Scientific Design

Fundamental laws of architecture were carefully observed in the design of Brikcrete. As shown in the cut-away view, each vertical member is flared out toward the top which provides a substantial base at each weight-supporting point. The center member is extra large, providing liberal support for the ends of the units in the course above. Thus, the super-imposition of one solid member upon another forms columns of solid masonry the entire wall height, alternated by unbroken columns of dead air areas.





Brikcrete Builds Beautiful Homes







Commercial Buildings can be Better Built of Brikcrete